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Joseph Nash.

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W. STANTON ROBINSON PERSPECTIVES

Postal Telegraph Bldg., 253 BROADWAY

TERMS MODERATE

NEW YORK

PROFESSIONAL COMMENT.

A CORRESPONDENT writes asking "what is the difference in the meaning between the words Architecture and Building. Building excellence is, or is not, the whole of architecture according to what we agree to make the words cover by definition. It would be a fair and possibly the best of the two words to make them absolutely convertible. Or by agreement we can define architecture to mean something more than building, if we will only clearly decide what the difference shall be. Our present use of the word is ambiguous and most misleading. We think we assume meanings something like this:—Building means unworthy architecture; architecture means noble building. Surely it is an unscientific definition thus to say "Building means poor building, good building is architecture"; yet there would be no great harm if we meant it. But notice; farmsheds and bridges by this definition, become Architecture, and much designed and exhibited villas become Building! Seeing this, some writers, with whom we agree, have said, in effect: "As we have two words in use, and as 'Building' must include in its meaning the best building that may be, 'Architecture' should mean that higher unity known to us in the history of great periods when fine building, sculpture, painting and other arts were intimately associated and combined organically." This search for a definition may seem merely verbal and formal, but we wish to show that in either view it is clearly apparent that architecture in the main is building; the function of the architect is to build, and the purpose of architectural education is to teach him to build well.

AS a man of system the union laboring man of to-day cannot be beaten. The planking on Broadway near Fulton street New York was being rejuvenated a few days ago. One man picked up the piece of plank, which had been cut to length by another, and handed it to a third who laid it in place. A fourth handed the nails to number three, who nailed the plank down without further assistance than that provided by a fifth, who stood by with a red flag to prevent any of the men being run over.

THE New York Chapter of the American Institute of Architects has decided upon offering an annual gold medal at future exhibitions of the Architectural League of New York. This medal is not to be awarded for draughtsmanship or for design of work which has not become a reality. The competitors for the medal of the New York Chapter will be expected to announce the fact upon entering their exhibits and to show both working drawings and the photographs of the finished building as a basis upon which their work is to be judged. The details under which the award is to be made are now being formulated and the chapter hopes to be able to offer its first medal at the exhibition to be held next February.

OLD English furniture is deservedly popular. The modern cabinet maker has produced nothing so satisfactory. The craze for Chippendale and Hepplewhite has vastly improved the designs of the manufacturers of commercial stock, many of whom offer excellent modern copies at low prices. We have imagined that this furniture was popular because it was beautiful in its lines—but we fear that we overestimated the improvement in public taste and that it was really appreciated for the reason that it could be proclaimed as a "real antique." Up to the beginning of the nineteenth century the style was pure—its grace of line was combined with

strength of construction. After this period the designer seemed to be impressed with the fact that the average Englishman was increasing in weight—that cords of lumber were necessary for his support and these ponderous pieces of mahogany so familiar some thirty or forty years ago were the results. Lovers of the house beautiful had hoped that these monstrosities were banished for all time together with their even uglier neighbor the hair-cloth sofa; but we regret to see that our homes are threatened with a renaissance of all that was bad in furniture during the period of the classic revival. It is now old enough to be “real antique.” Hence its popularity.

THE State of Minnesota is following the excellent example set by the Government on Beacon Hill in the decoration of its state house. Mr. Edwin Blashfield recently exhibited to his New York friends two large lunettes, painted for the capitol at St. Paul, which are thoroughly typical of all that is best in American mural decoration. The subjects though allegorical are simple. They tell the story of Minnesota plainly. They are vigorous in drawing and broad in treatment. Their destination in this western capitol speaks volumes for the progress of mural painting in the United States.

THE architect has a new competitor. He is not a member of the Institute. He manufactures soap—and he advertises the fact extensively together with the offer that one hundred soap wrappers turned in by the consumer will entitle the sender to a full set of plans of a “beautiful \$3,000 Colonial house.”

ONE of the first effects of the opening of the subway in New York city is the demand for the underground store. Business has long ago encroached on the domain of the heavens and it is now contesting the lower regions with the prince of darkness. Even as the subway opens, stores are ready for occupancy at at least three stations and a further demand for them may cause a revival of the old arcade idea which was actually boomed during the reign of Boss Tweed and by which the entire length of Broadway was to be paralleled underground by a complete street with stores on either side and the railroad in the center.

A small section of this arcade was constructed at the time at Broadway and Warren street where it still remains as a reminder as of past efforts to solve the problem of rapid transit.

THE larger American cities are notorious for their lack of foliage which in a great measure is responsible for the cold and cheerless atmosphere of our streets. We therefore heartily commend to the architects the recently issued report of the committee on Flowers, Vines and Area Planting of the Municipal Art Society of New York in which they very properly attribute our present condition as being in a measure due to the lack of co-operation on the part of the architects, stating that:

“If the architects in the designing of city houses would construct the window sills in such manner that they could be used as flower boxes; if, in their specifications, they would provide for the required holes to be left in the concrete at the bottom of the houses for the reception of vines, and if they would provide for the required openings to be left in the sidewalks for the reception of shade trees; and if they would further provide that these openings be properly filled with vines, trees, etc., New York would soon take on a new aspect. The difficulty, however, in connection with private individuals planting their own trees, lies in the fact that the trees on every block must be equally spaced, irrespective of the houses, and should be of the same kind, irrespective of the tastes of the various individuals.”

The committee further urges the establishment of municipal nurseries with a force of men for the special purpose of caring for the street and boulevard trees, just as there is a force of men devoted to the public parks.

In opposition to this commendable propaganda a decision has lately been rendered by a Supreme Court Justice in Brooklyn denying the application of a house holder for a permanent injunction against an adjoining church restraining the defendants from tearing down a Japanese ivy vine from the walls of the church the roots of which were in the yard of the appellant.

The church people recently announced that the vine made their walls damp and declared their intention to remove it and to paint the wall but the adjoining owner promptly obtained a temporary injunction restraining the church people from removing the vine or trespassing on the property.

In the decision the Justice stated that the vine constituted a trespass on the defendant's property and that the defendant might remove it doing as little damage as possible in its removal. The church people were also given permission to paint the wall from their neighbor's property.

The prevalent superstition that these vines cause dampness dies hard notwithstanding the many scientific opinions given to the contrary, and the committee of the Municipal Art Society would



Architects of To-Day.

MR. AUGUSTUS N. ALLEN, NEW YORK.

perform a public service in the cause of municipal beauty by using their efforts to destroy this old belief. If this information were scattered broadcast it might serve to save the few green spots which our large cities are fortunate enough to possess.

NO class of advertisers has been so persistent in its efforts to reach the architects during the last few years as the manufacturers of rust resisting paints. The profession has been overwhelmed with literature on the subject replete with analyses presumably from men whose opinions should be accepted as final in the line of analytical chemistry, each insisting that the particular product which had been submitted to him was the only pigment which would prevent rust. About a year ago a gentleman from Chicago visited the New York offices armed with numerous letters of introduction and a large portfolio brimming over with reports advocating the product which he represented. He was courteous in the extreme, and this fact joined with his habit of persistency secured for him many prolonged interviews in which he not only boomed his own material but seemed to prove conclusively that all materials of a different character were worthless. A few months ago this gentleman appeared again in New York in the interests of another product—equally persistent and as communicative as before. He visited all of the men who had listened to him on his first visit. He was armed with even a larger number of scientific documents. He was equally strenuous in extolling the merits of the material which he had before conclusively proven to be worthless. The enormous increase in the amount of exact knowledge which the modern architect is supposed to possess makes it absolutely impossible for him to devote his time to personal investigation of all the products which he must specify in his practice. It has become his habit to rely on the opinion of experts and specialists in many lines. Methods of this character are not conducive to establishing the confidence which should exist between the architect and the commercial house of established reputation.

THE enormous increase in the necessary mental equipment of the architect is sharply indicated by the largely increased size of the new edition of Kidders' Pocket Book which has just been issued. In explaining his reason for the increased bulk of his work, the author points out that in the earlier editions but very few pages were given to subjects connected with structural engineering as at that time this subject was considered more within the province of the bridge-builder than the architect. This is but one of the many subjects in which the modern architect is now supposed to be an expert. In times of less complicated construction it was possible for the architect to assume and proclaim that he was an expert in all of the building crafts. To-day he cannot fairly arrogate to himself the amount of exact knowledge which he is theoretically supposed to possess. He must rely upon experts. There is but one way to secure this expert assistance in such a way that the architect can rely upon it being unprejudiced, and unfortunately many architects do not avail themselves of this method. The expert whose opinion is given in a professional capacity is the only one whose opinion should be taken at par. All others are apt to be biased by the supposed merits of the particular product in which they deal. In order to push that product they are continually soliciting the architect for permission to prepare drawings, specifications and technical data which do not insure an impartial investigation of the best

methods of securing the desired results. Their proposition is tempting to the architect as he sees in it the saving of the professional fee which he must otherwise pay to an expert and he frequently yields; although in his heart he knows that he is not giving his client the benefit of the sort of service for which he is supposed to pay. This temptation is emphasized mainly through the fact that on many large works the architect is underpaid. Such works impose on the architect a large amount of technical work which is not adequately recompensed even by the usual five per cent., and it is to be hoped that the profession will endeavor to establish the custom that the client should properly pay the fees that may be necessary for experts if special service is to be rendered by them. This condition does not however excuse the practices now in vogue, and if the architect accepts a contract with full knowledge that expert service will be necessary to secure the best results, he is in honor bound to secure it—and to pay for it out of his fees if necessary.

THE Honorable Francis G. Newlands, U. S. Senator from the State of Nevada, has certainly earned the thanks of the entire architectural profession by his defense of architects and their charges in the acrimonious debate which took place in the Senate chamber during the last session when that body was considering the compensation of architects with particular reference to the White House restoration. Most of the Senators seemed to be totally unacquainted with either the duties or the function of the architect and in answering these gentlemen Senator Newlands said:

"MR. PRESIDENT: I quite sympathize with any effort which tends to secure economy of expenditure in any government improvement, provided the efficiency of that expenditure is not impaired.

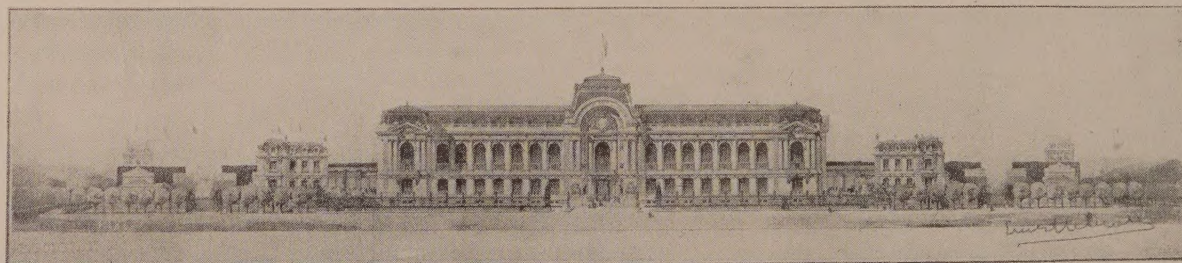
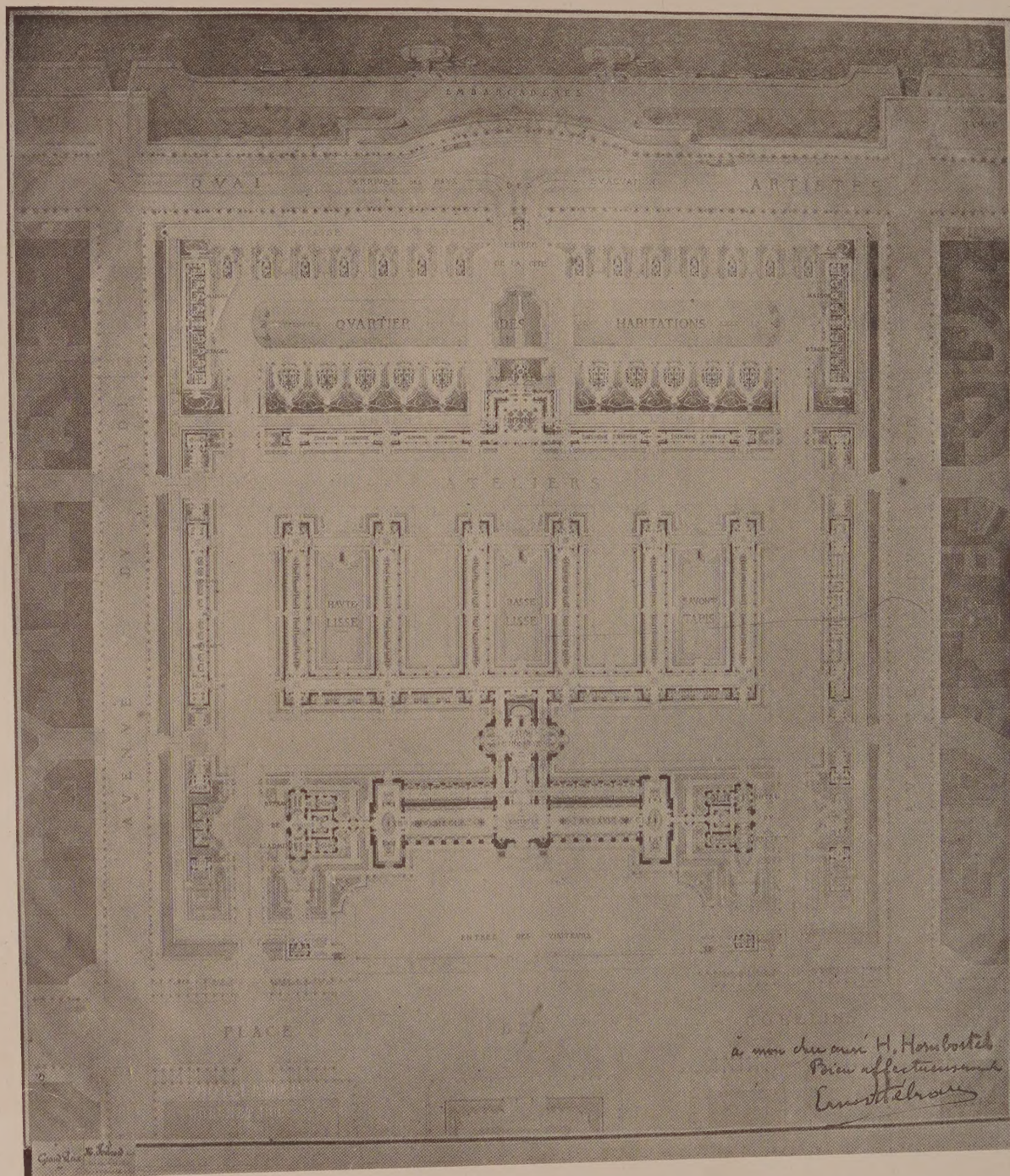
"Years ago I used to have the same views regarding architects which seem to be entertained by the Senator from Maine; but after some years of experience in connection with building upon a large scale, matters in which I was personally interested, and matters in which corporations in which I was interested were engaged, I have come to the conclusion that there is no body of men in the United States more maligned than the architects of the United States—not intentionally, but simply because of unfamiliarity with the subject."

Replying to Senator Gallenger who charged that architects were usually more interested in enlarging their bank accounts than in promoting art, the Senator said:

"As to bank accounts, I have never known an architect within my experience who has reached large fortune. I have always found that the great architects are much more interested in the perfection of their work than they are in the amount which they receive. I am sure that some of the greatest of our architects who have engaged in great works, involving very large expenditure of money, have paid out in the elaboration of their plans almost all they have received."

In the course of the debate it was also brought out that the Supervising Architect of the Treasury had said that the cost of "making drawings, specifications, &c., in his office has ranged during the past five years from about three and a half to over four and a half per cent. of the total cost of construction."

Senator Newland's efforts in the direction of proper compensation for the worker in the arts was evidently not inspired by any temporary appreciation of things artistic, for in a later debate on the subject of "The Building Line on the Mall" we again find him earnest in his advocacy of the importance of aesthetics in the municipal improvement of the Capital City.



GRAND PRIX DE ROME, 1904. AN ESTABLISHMENT FOR THE MANUFACTURE OF TAPESTRY.

M. Ernest Hebrard, Atelier Scellier de Gisors.

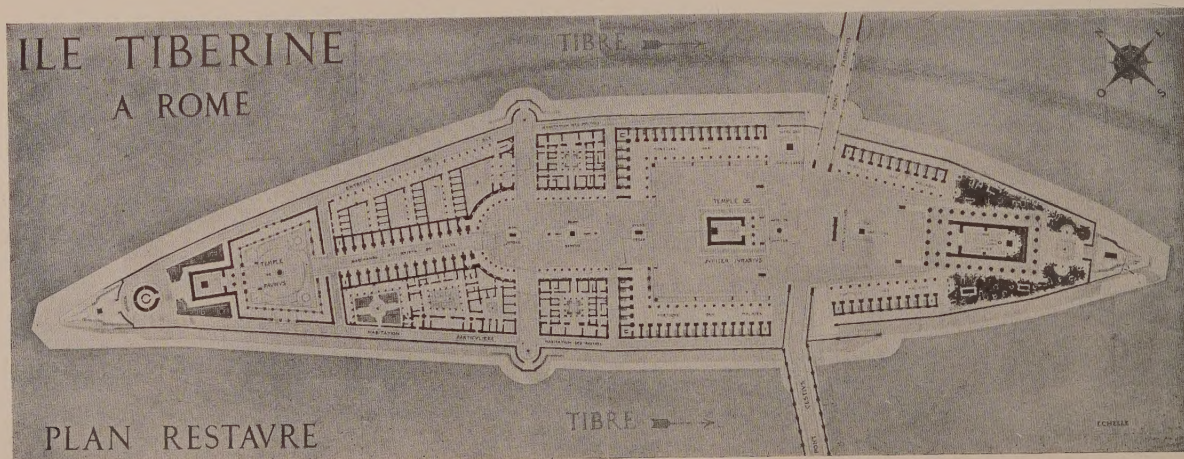
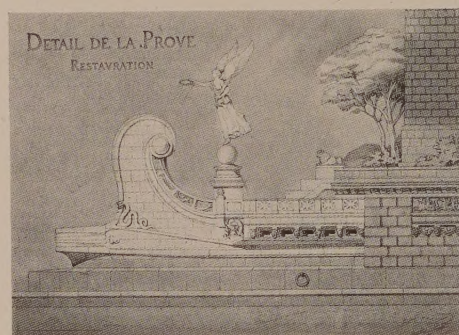
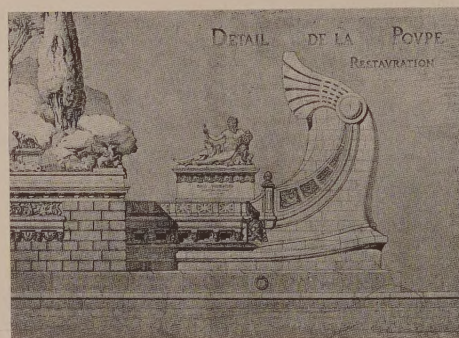
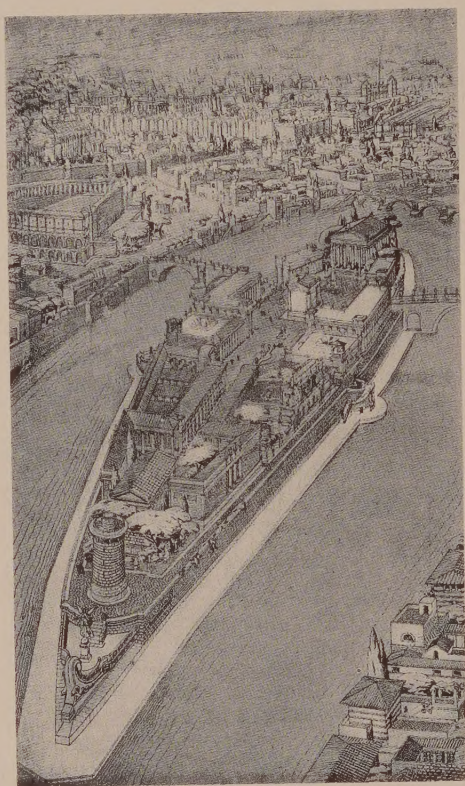
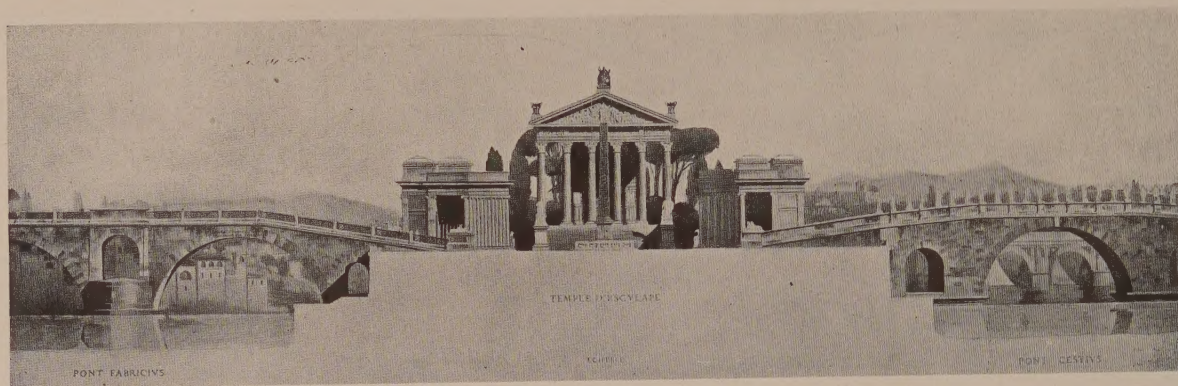
SCIENCE AND BUILDING.

C. M. MORRIS.

MODERN building construction so largely depends on the results and applications of science, that the professional man cannot be too sure that he has fully mastered any particular problem that is presented to him. For instance, he may design a hospital that is faulty in several hygienic conditions that have been proved essential to the treatment and cure of disease, simply because he has neglected to keep himself abreast of the subjects of ward arrangement, cubic air-space per patient, or disinfecting devices; or he may build an assembly-hall or theatre without taking into account the latest results of acoustical science, or the proper system of ventilation; and his plans for elementary or secondary schools may be rendered abortive by the introduction of windows on the wrong side of the pupils, or by placing them on the side where the sun seldom enters—all serious defects or mistakes, which impair the highest architectural ability spent on the designs. Yet all these faults are seen in otherwise able works, as if their authors thought they were minor matters which could be corrected afterwards. Probably a great deal of inattention in these matters is owing to the lack of practical instruction during the earlier years of pupilage and class teaching. Scientific principles and theories are taught. There are textbooks and treatises by the score in every subject, but few of them are written from the architect's point of view. If they do refer to buildings, as in such a subject as acoustics, the author is not very precise or practical in applying his theory to the actual building. There is little given by which the architect can determine dimensions, form of ceiling, floor-gradients, the grouping or curves of the seats and tiers, materials, and shape of orchestra or stage. Books abound on warming and ventilation; but few specific rules are given by which the system or heating apparatus can be applied to suit particular requirements. The nostrums of ventilating experts and commercial firms—the more complex and mechanical they are the more they are appreciated by a certain class of people—are worthless in a majority of cases which occur, having been based on an imperfect acquaintance with the requirements of the premises. We have rules and formulæ given in certain books which indicate the amount of piping required to heat certain rooms; but these may prove very misleading, if no account is taken of the temperature of the outside air or the area of glass windows. So the extraction of air or its velocity, as up a chimney, cannot be given for all rooms alike: it will depend on the degree of rarefaction of the column of air: height of shaft, and outer temperature. Again, it is hardly safe to conclude that external ventilation will always act: there must be a supply of fresh cold air to induce an upward draught; otherwise an outlet may act in a contrary direction, especially when no induced current, caused by a vacuum on the outlet, exists. Wind currents across the outlet are among the motive forces, though these may be impeded by obstructing buildings. Indeed, the whole question of ventilation depending upon air currents is one which rests on a variety of conditions—temperature within and without, the prevalence of winds, and other causes requiring very nice and accurate observation. A plan of ventilation that will do well in an ordinary room will often be a complete failure when applied to a large hall, church, or theatre. No hard-and-fast rules can be laid down; these are generally based on unestablished theories or mere assumptions from a few special tests. Indeed, experimental data have not been established with any scientific precision, so that it is necessary for the architect to accept rather cautiously the conclusions drawn by theorists before applying them to buildings, where,

perhaps, the conditions are completely at variance with those assumed as normal. Varying conditions and circumstances so often render laws inoperative that no reliance can be placed on them. These are difficulties which the architect has to contend against in such matters, and which often make him averse to adopt scientific principles. To formulate principles that may be applied to buildings without any risk of failure is one of the many requirements.

In addition to those subjects we have already noticed it would not be difficult to name a dozen or more applications of science of everyday moment. The principles of lighting as applied to certain kinds of buildings, like art galleries, schools, laboratories, museums, basements of buildings in our crowded cities, are very inadequately observed. A good many of these buildings are not lighted at all on scientific principles; it is the distribution and position of the window openings that is the ruling motive with the architect, who consults his plan and elevation in their design without any relation to aspect, the objects to be attained, such as reading and writing in schools, the viewing of pictures and specimen cases in museums, and other purposes. Aspect is of the first importance, not only in house-building and offices, but in those special buildings we have named. The edifices should be placed on the site or planned so as to obtain the maximum advantage of the sunshine during at least a certain portion of the day. Principal rooms in a house should receive their light from the south-east, south-west, and north-east, the *first* aspect being the best. To this end, of course, the house ought to face not direct north or south, but be placed between the points of the compass. Schoolrooms and classrooms, for like reasons, ought to be lighted from the south-east, south, or south-west; but as it is often impossible to do this in town sites, the architect must exercise his judgment in securing the best light obtainable for his classrooms, placing his large hall, entrances, cloakrooms, lavatories in the less desirable directions. As in other matters like ventilating, favorable conditions are not always found, so the theorists' standard has to be abandoned for other expedients. Often the building is obscured on two or more sides. What can the architect do to secure the best and largest amount of light? The pencil of rays entering the window apertures can be enlarged by making the openings higher or wider, and here it is well to remember that the upper part of the window admits more desirable light than the lower position. The blinds and other means of shading the windows should be so arranged that light may not be shut out unnecessarily. The window piers, mullions, and heads can be played so as to admit as much light as possible to the interior. The application of the principles of refraction or breaking up the light so that it may enter in any desired direction, or the diffusion of light or its reflection should be mastered. At present, architects do not depend much on these expedients, yet they are very important ones. Thus if left light is unobtainable in a classroom, light may be directed by reflectors or prisms to the ceiling, and from it reflected downwards on the desks of the pupils, or it may be reflected from the left wall of the room. One instance of such an application would be a large shop or storeroom on the ground floor of a building in a narrow court or passage with lofty buildings in front, shutting out the direct light. In such a case the right plan will be to give a wide area of light to the window or windows; or, if a warehouse, make the window openings extend the whole length of the room with glazed sashes, and continue them to the ceiling level or nearly so. All cornices outside should be kept flat so as to cut off as little as possible of the light from the sky. If still too dark, prisms may be introduced to direct the light from sky into the room, or reflect-



tors placed projecting outwards from the fanlights to throw the light into the interior. These are ordinary expedients; but if scientifically managed by selecting the proper angle of ribbed glass, the room may be made habitable for work. The lighting of picture galleries and museums has to be specially considered. Illumination in a picture gallery must be a top of light, and this may be directed on the wall surface intended to be hung with pictures; a library or news-room for reading should also be lighted on scientific principles, though these are seldom attended to. The Greek method of top-lighting their temples by clerestory openings was a scientific mode of admitting sunbeams. These are expedients, but there are a few scientific principles to be observed in the design of windows. One authority says the superficial area of light may be equal to one-half the area of one wall of the room if lighted only on one side, and does not exceed more than one and one-half times its height in depth. A deep room cannot be lighted effectively from one side only when it is more than twice its height in depth. The higher the top of the window, the more light will penetrate to the back of the room—a rule that ought to be observed in lighting rooms of any great depth. Speaking of school lighting, Dr. Coln, a specialist on the subject, says the relation of window space to floor space should be at least one to six, which proportion of light to area is found to give the best results. Top-lighting, of course, is far more effective than window lighting; in fact the light admitted by a skylight is thought to be equal to thirty times that by a window.

THE ISLAND OF TIBERIUS, ROME.

THE capitol piece of work of the Salon of 1904 is the restoration of the Island of Tiberius by M. Patouillard.

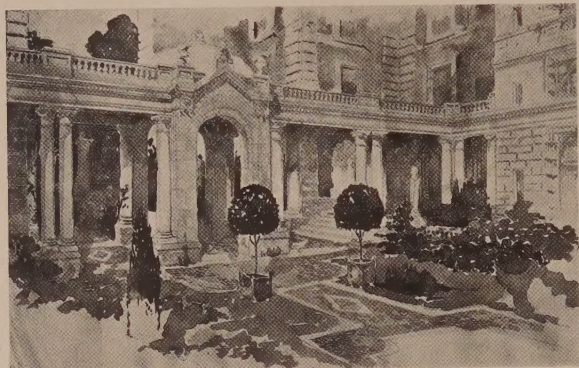
Though occupying a prominent situation in the centre of the city, the island is to-day a miserable ruin that stands out a silhouette of great picturesqueness in the middle of the Tiber, tied to the shore by two antiquated bridges. In the time of Caesar the island was covered with temples and monuments. The Roman architects gave it the form of a ship and vestiges of the prow and stern yet exist.

M. Patouillard, by patient research, has been able to reconstruct the ensemble of the edifices which originally decorated the island and it is a restoration of great archaeological precision, a rendition of high value.

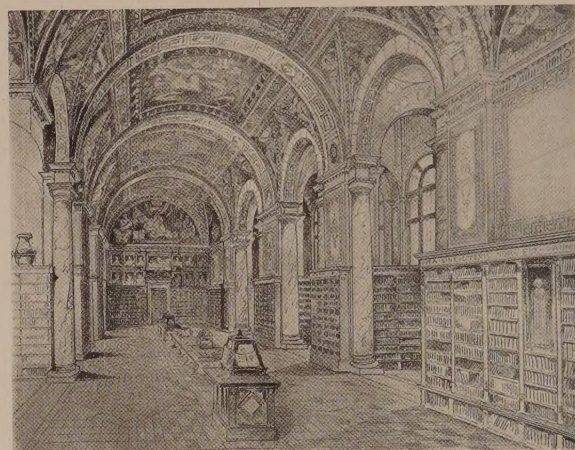
SCULPTURE IN ARCHITECTURE.

OUR buildings have been declared by the late Mr. Fergusson to be lacking in the phonetic qualities of the other arts. That is to say, he divided all the arts into Technic and Phonetic. The first group comprises the arts of shelter and clothing, the latter those arts which arise out of the gifts of speech, comprising poetry, sculpture, and painting. Of course, there is no sharp line between these two groups; there are imperceptible variations between the building which simply performs the office of a shed and that which seeks to express the traditions and historic greatness of a municipality, a great town hall or church. Mr. Fergusson observes that during all the great building epochs progress was achieved in architecture by the simplest processes, and nations, however uncivilized, were able to design and build the most beautiful structures. It was by a slow, bit-by-bit process that our great cathedrals were reared. In those ages the individual was nothing, while now it is reversed; the individual is everything, while the age is of little importance in

an artistic sense. The Mediæval chapter decided on the general plan and details of a cathedral, and it was carried out by craftsmen who had an equal share in the result. So it was with architecture in all the historic ages; but it is not so now. The man who wins the competition or designs the building is everything, the others are crafts merely subsidiary. Fergusson, in fact, says it was with architecture in the Middle Ages as it is not now with engineering, the only way an art can be cultivated on true principles. So it was, in fact, with all the technic arts; but with the phonetic arts, like painting and sculpture, and poetry, it is otherwise. The individual may and must be everything; so we are prepared to give a small fortune for a picture by an eminent painter, but refuse to buy even the most perfect copy. Though we may build better bridges than were built a few hundred years ago, and build better houses, we do not produce better sculptures than those which Phidias executed; nor can better dramas be written than those of Shakespeare. This is all true. Yet there are phonetic qualities in architecture; every piece of sculptural decoration, every building which can express a sentiment or an emotion is phonetic. Can we not arouse a sense of awe by massiveness or severity of design and detail, or the opposite quality of gaiety by light and fanciful arrangements of line and profile? In fact, there are degrees of phonetic qualities in architecture, and one of the means by which they are expressed is by sculptural adjuncts. Sculpture, in fact, has long held a very subordinate place in architecture. The modern architect is seldom a born sculptor, and this we must attribute largely to the separation that has taken place between the technic and the phonetic arts, or the useful or ornamental arts. Although the individual is everything in modern architecture, the fact has not done much to make sculpture a handmaid as she once was—rather the reverse. Why is this? It is because at the time of the Renaissance, or, as Fergusson says, the Reformation, the true principles of art were lost. We may say, in other words, the alliance which had hitherto existed between architecture and the sister arts of sculpture and painting and decoration was broken. The several arts which before co-operated lost their coherence, and became separated into often antagonistic elements. This want of union was due to many causes—one of the chief the dissolution of the craft guilds and the setting-up of the individual and commercial ideal. The question has been discussed by many writers, but we may take it for granted that sculpture, decoration, and the various crafts in connection with building lost their hold on architecture and began to be practiced as independent arts. Sculpture has too much been looked at as a distinct art, having rival claims with architecture. In this view we have seen groups introduced in pediments or on pedestals quite independent of the building. The usual plan is to leave niches for statues and groups at the corners of the building above the cornice or pediment; in fact, a sort of rivalry is set up between the architect's and sculptor's work as to which is the more important, sculpture of course, appealing more directly to the public taste. A great deal has been written and argued on both sides, and it will remain one of the crucial points of art. One writer on the subject very judiciously remarks: "When the building is the main thing and sculpture its adjunct, as in most instances in the proper relationship, it does rest very materially with the architect to know and decide upon the fitness of the decoration in order to insure the completeness of the whole. Thus the character of the sculpture, the choice of relief, the severity or freedom of the moulding, and also in a great measure the choice of subject should be in his hands, in



Entrance from the Boulevard.



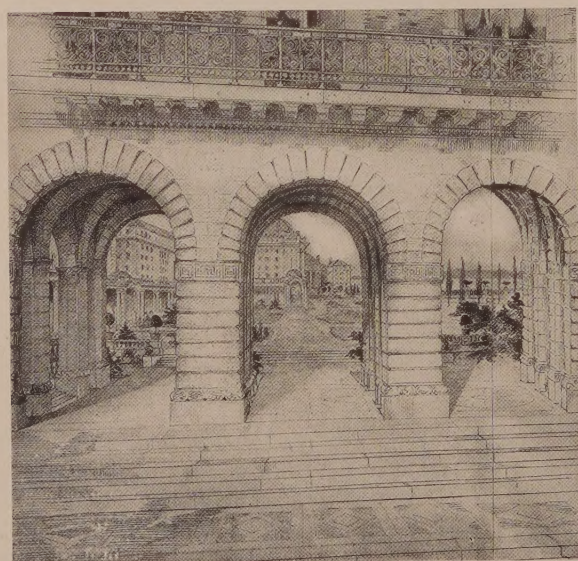
Interior of Library.



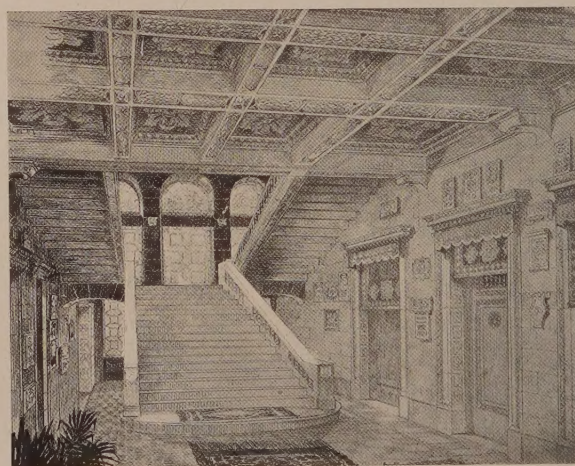
A Picturesque Nook in Quadrangle.



An Upper Hall.



View looking into Milbank Quadrangle.



One of the Staircase Halls.

consultation, of course, with the sculptor employed. It may not be necessary that he should know how to model or carve, but he should know when the work is well done, and whether it is fitly designed—in fact, true art; and not, through lack of knowledge and taste, be content with the rubbish that is too often called decoration. Therefore, when good sculpture is to be seen, either on the outside or forming part of the internal decoration of a building, it reflects as much, or even more, credit on the architect than on the sculptor."

BARNARD COLLEGE.

THE double page plate shown on pages 172 and 173 represents the proposed scheme for the enlargement and completion of Barnard College, Charles A. Rich, Architect. The group in the extreme left is the present quadrangle of Milbank, Brinckerhoff and Fiske Halls which were erected by Mr. Rich five years ago, and fill the block between 119th and 120th Streets and the Boulevard.

The completion of the scheme has been made possible through the generosity of Mrs. A. A. Anderson, the College having now secured the entire plots between 116th Street and 119th Street. The plans call for twelve new buildings with a complete cloistered system and a charming raised open quadrangle in Claremont Avenue, and facing the river. Standing in the Quadrangle of the present Barnard College Buildings, one looks through to the south into the large open Milbank Quadrangle facing the river. The arches are two stories high, and over them is the Library, with entrances from the Easterly and Westerly buildings, and forming a beautifully domed room one hundred feet long by sixty feet wide, with large alcove windows on the North toward the present Barnard buildings, and toward the South into the new Milbank Quadrangle.

The series of twelve buildings are all connected by the cloister system. These cloisters run across the Easterly side of the Quadrangle, around the large Auditorium building, which is the central building of the Quadrangle, and enter the group of six buildings on the right towards the South. The cloisters open on the large Milbank Quadrangle, whose line is about fifteen feet above Claremont Avenue, and looking toward the Hudson River and the distant hills.

Woven into the Quadrangle will be secluded nooks of shrubbery, filled with antique bits of statuary, picturesquely interspersed with gardens, flowers and vases. The entrances from the Boulevard are through domed portions of the Cloisters, and the walks throughout will be laid in brick.

The Staircase Halls are to be in stone entire, with the coats of arms of the different classes built into the walls, which will in time form a heraldic story of college life.

THE DETAIL OF BUILDINGS.

A. C. MORGAN.

TO the mind of the architect the word "detail" conjures up an infinity of things more or less belonging to the building. It is not only of architectural detail that he thinks—such as piers, mouldings, jambs, cornices, string-course, window tracery, and the like; but of the numerous things which fill up the specification relating to materials, appliances, methods of construction, and fittings. The details make the building, and to them the architect

must look for the success of his work and its usefulness and effect. Yet there are men in the profession who take very little trouble about them; they are regarded with impatience, or as if they belonged more to the builder or tradesman, and were beneath his particular attention. To such an order of minds the practical requirements of building count for very little; they look upon the design as a whole as if there was little more to think about than the plan and the elevations. Important as these are, they cannot be properly dealt with without reference to certain details, and the architect's work in this respect cannot be compared with the arts of painting or sculpture, where the general effect may be sketched or blocked out in the stone without any serious alteration being required to be made afterwards. In writing a treatise, too, on any given subject, the author may safely leave his details till after the general subject has been discussed. But the architect cannot safely pursue this method when he begins seriously to draw out his design. His preliminary sketches may be made without attention to details; his elevation and plan may be roughly sketched out, but directly he begins to draw them to scale a variety of things have to be considered and thought over, such as the area and accommodation of apartments, their lighting, means of access, width and number of doorways, staircase, depth of floor, and other structural matters. The difference between a practical and impractical plan will depend on the attention to details which it exhibits. Thus, how often we find in the plans of houses and cottages and other buildings that the architect or draughtsman has not allowed enough width in his bathrooms, or lavatories; or if a stairs ascends over them or a hall, the number of risers is not sufficient to give the headway required, or the plan of stairs does not show the number of steps necessary to ascend easily to the next floor, of the height intended. The doors of rooms are not placed to clear furniture or fittings, or to prevent draught; fireplaces are put in positions that are awkward, and cannot be easily constructed; and the support of partitions has not been considered. When special provisions have to be made for heating apparatus, boilers and flues, dynamos, or any plant, we see the most egregious mistakes—such as the omission of a boiler-house; no means provided to get in boilers or apparatus, or to supply fuel; an ignorance of the simplest requirements in the application of electric power or lighting. These and other deficiencies in the plan are evidences of unskilful design which are at once perceived by the practical architect. There are some architects who show their attention to detail in the wrong way. Their competition plans are rendered very elaborate and highly confused by the patterns of tile pavements or ceiling decoration which fill up every room or vestibule and corridor—of course a very ridiculous and unnecessary waste of labor. Others, of a more practical turn of mind, draw in every drain, pipe, or flue for heating or ventilation. The really practical architect does not do things in such a fussy way; but his plan exhibits a thoughtful regard to all these requirements, the thickness of walls and the indication of any flue or special construction. "Where does detail come in?" is a question to be asked by every architect. There is a place for detail, and this is one of the things which seems so difficult in mastering. We do not believe in forcing it or obtruding it into notice, like those who wish to advertise their particular wares or materials, or the man who has a craze for ventilation likes to show a labyrinth of flues and trunks in his plans and sections in blue or red ink. And there is also a place for architectural detail, though only the real artist knows where to put it, as we so often find it stuck everywhere, destructive

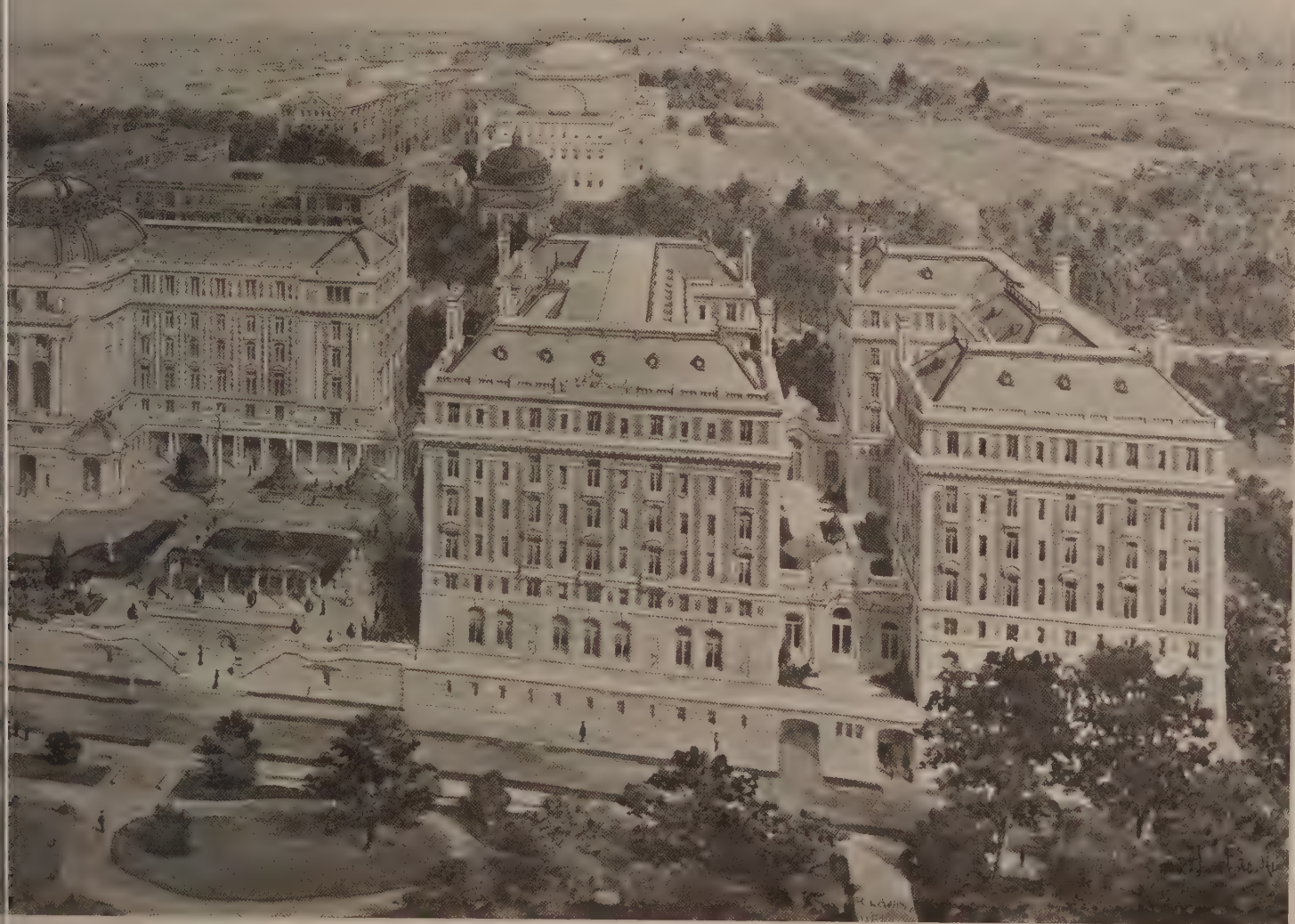
(Continued page 178.)

BARNARD

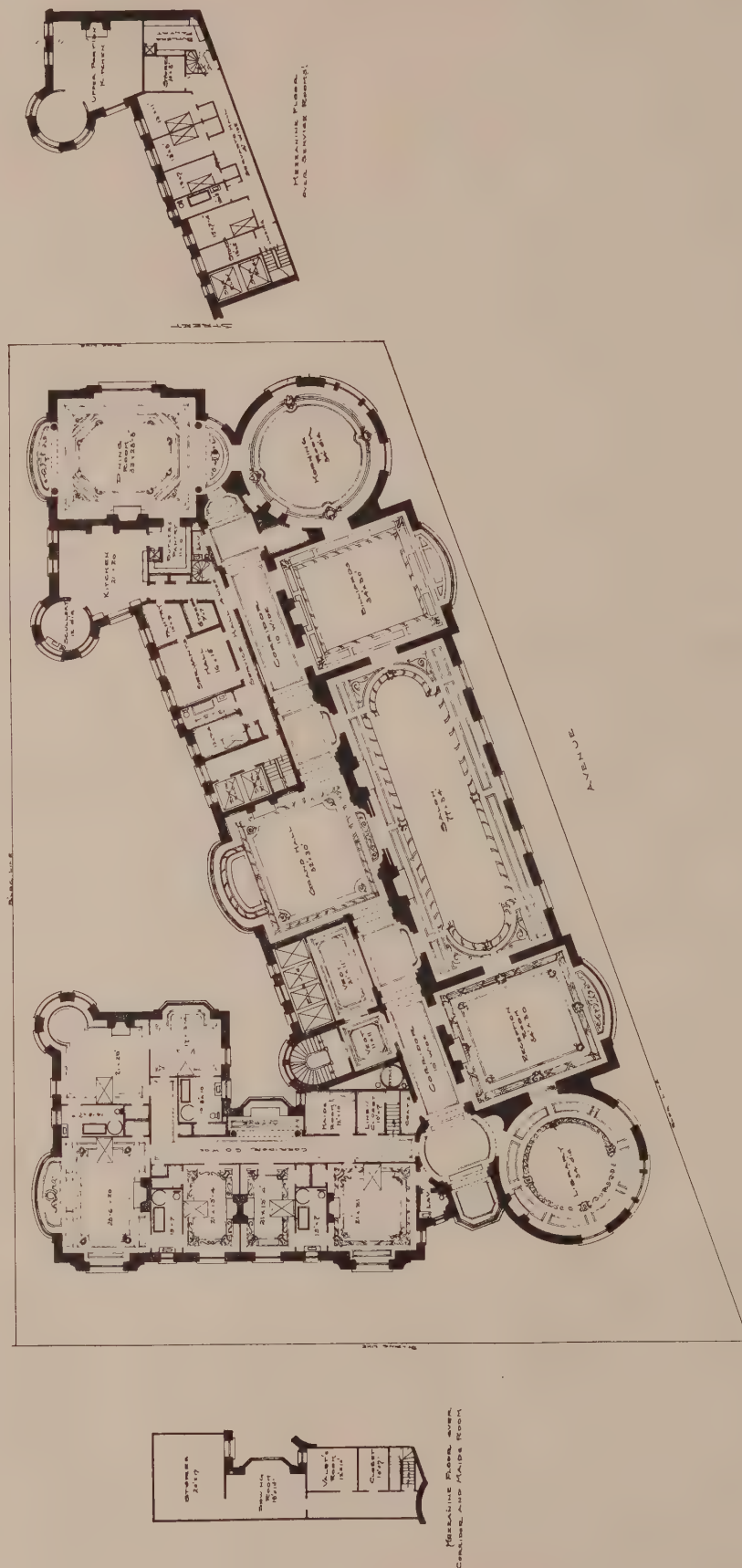


PROPOSED SCHEME FOR THE ENLARGEMENT OF BARNARD COLLEGE.

COLLEGE

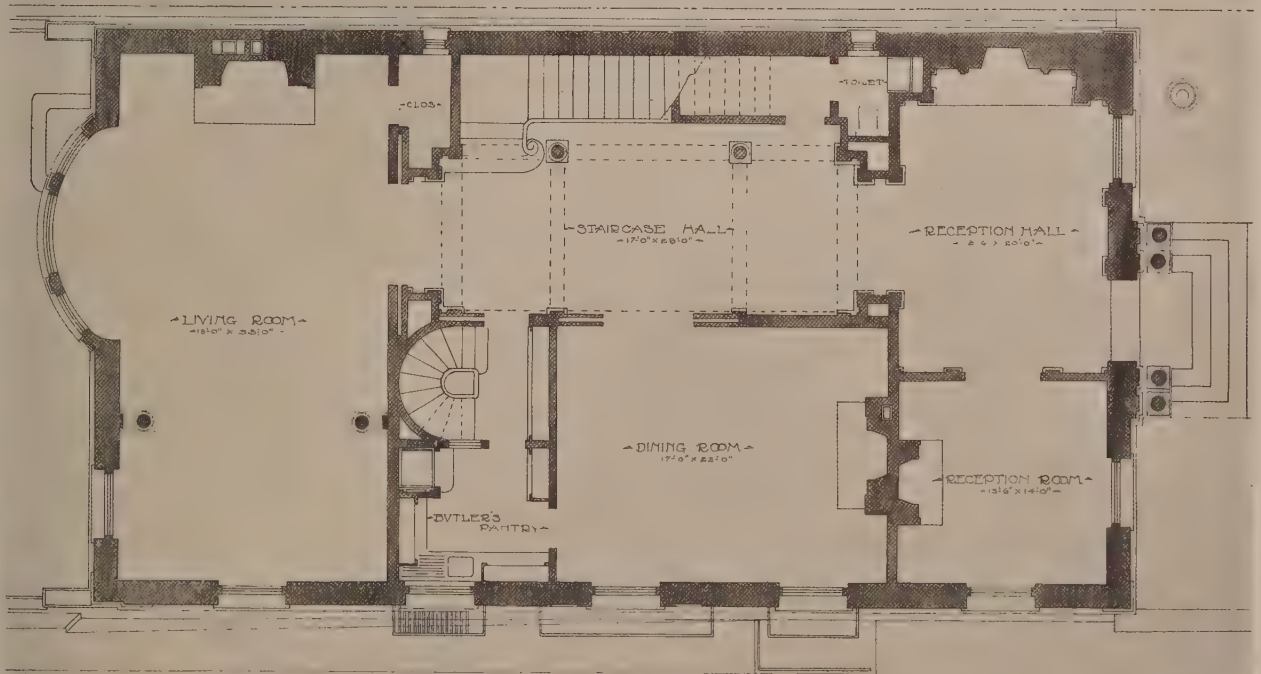
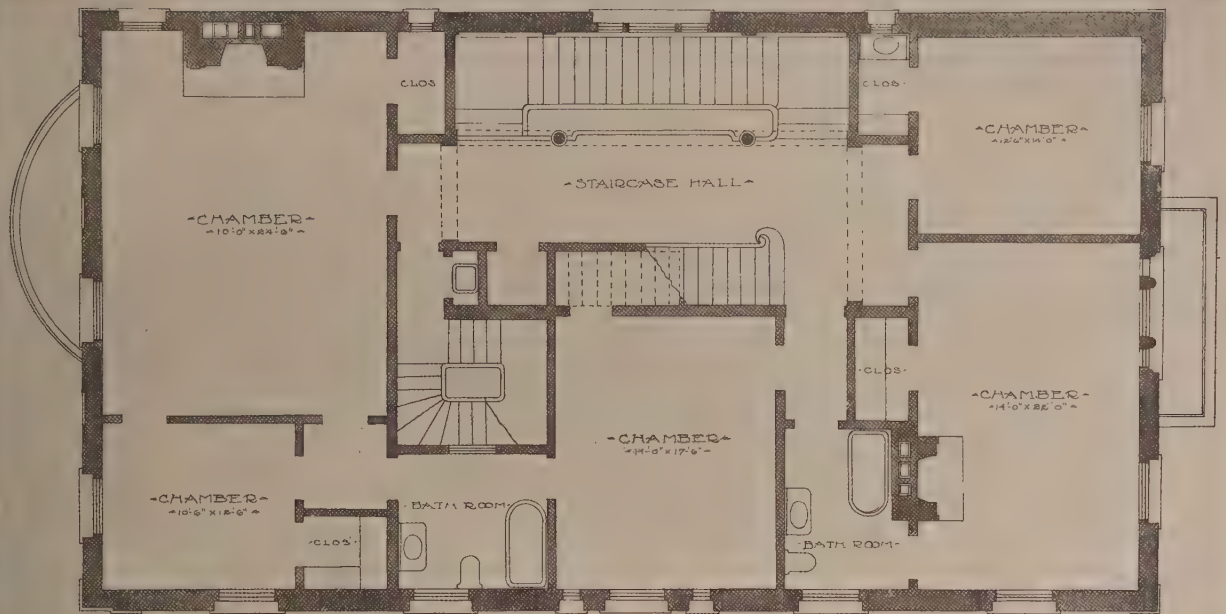


Charles A. Rich, Architect.



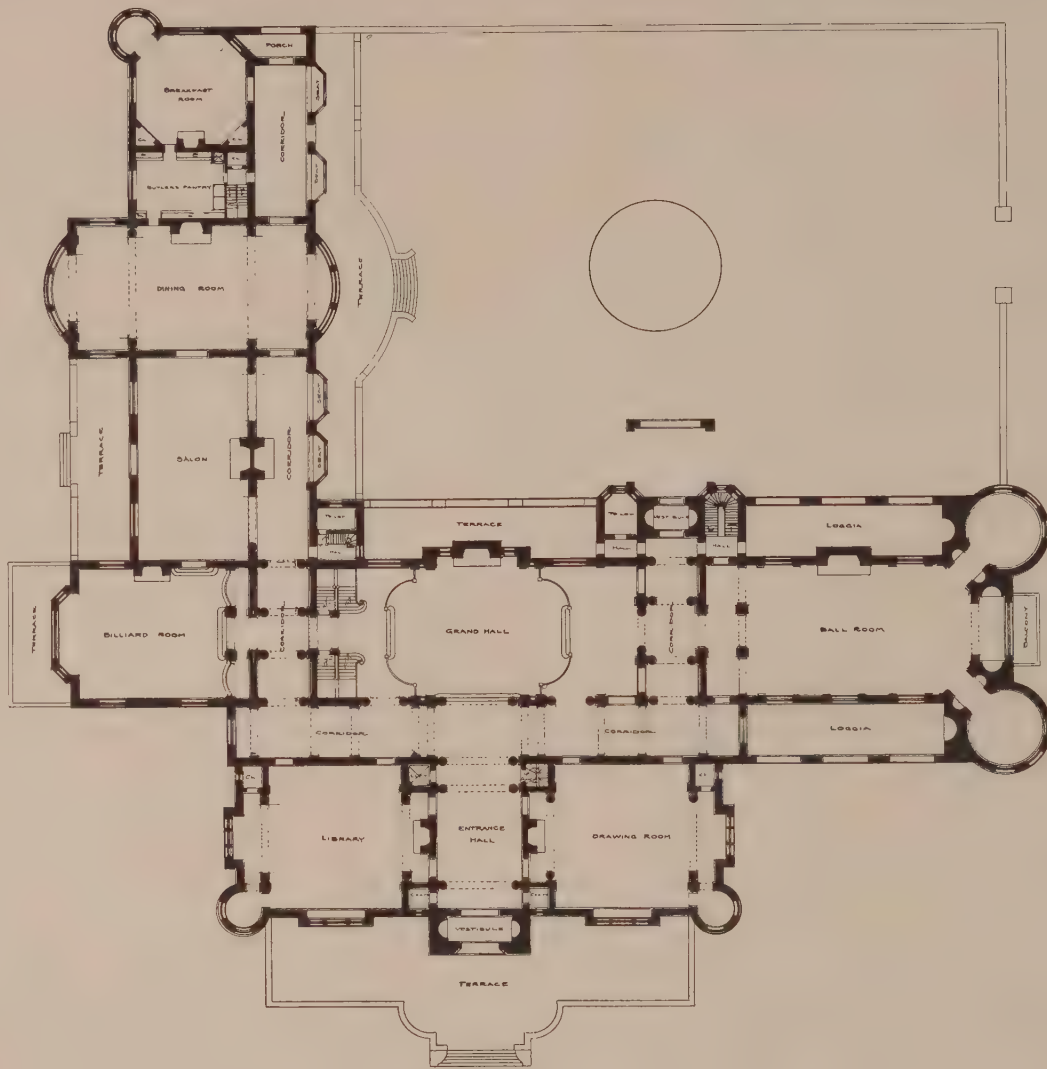
PLAN, APARTMENT HOUSE, CHICAGO. (See Plate lxxxviii.)

Augustus N. Allen, Architect.



PLANS, HOUSE, BROADWAY AND BAKER STS., SAN FRANCISCO. (See Plate xci.)

Bliss & Faville, Architects.



PLAN OF CHATEAU TO BE BUILT ON LONG ISLAND. (See Double Plate lxxxiv.)

Augustus N. Allen, Architect.

(Continued from page 173.)

to all repose, or placed where its purpose is defeated, and where it has no influence. "Let us put a little bit of carving or metalwork or stained glass here or there," we often hear the designer say, "it will lighten or pull the design up"—just, in fact, where enriched detail is out of place. There is a temptation with many designers to introduce detail just for the sake of the thing, instead of confining it to situations where it will give relief at certain restful points. A little carving or relief in a door archtrave, or in a panel over a doorway, or a well-designed piece of repoussé metalwork in a finger-plate, may refresh and relieve the eye, but becomes unendurable when we see the door and its framework smothered in such ornament. An architect will sometimes say that detail shows study, and with that idea he imagines the more detail he introduces into his design the better; but the mistake of this view is in thinking there is no such thing as a proportion to be observed between the plain parts of a design and the detail or ornamental parts. It is the relative value of detail that has to be considered. A front covered all over with elaborate detail, such as carving, is less beautiful and impressive than a facade in which the plain surfaces

impart value to the richness of the detail. Every artist knows how excessive detail destroys repose; but when used in moderation it imparts a value to plain surfaces in direct proportion to the latter. Even in positions near the eye this principle holds good. Thus in the fine wooden carved staircases and halls of the fifteenth and sixteenth centuries, where we look for delicate detail and enrichment, elaboration of carved newels and balusters is often seen, and a sense of fidgetiness and unrest are evident. The carvers in those times often ran riot in their work, as we may see in many of the chimneypieces and overmantels. The attempt is too often made to imitate the timberwork and carving of the fifteenth and sixteenth centuries without regard to the resources the old architects of those periods possessed. The same amount of ornament, carving, or detail is squeezed into a square foot or yard of walling, woodwork, or plastering of a new building without regard to scale or the slightest relation to the position or distance from the eye; that what is moulded or carved out of the solid panel or post is imitated in hollow deal boxed up with "planted" mouldings or enrichments, all which methods are unreal and dishonest, and encourage mechanical labor.

Detail implies finish—the two things are related—but, as one writer put it in regard to painting and sculpture, there must be a living unity of impression, which constitutes the artist's thought about nature. "It is this vital impression," he says, "which is ever the main motive in such differing works as the Classical Elgin marbles—the type of large simplicity—the Mediæval works of Leonardo and Botticelli, remarkable for their marvellous research of detail, subordinated to perfect unity, and the romantic modern work of Corot, in which the wonderfully living impression of nature is got, not by merely imitating the outer facts of nature, but by making an abstract of essential truth, and presenting it in beautiful artistic form." Those who have wrought these works have done so by a painstaking study of detail. This study has disciplined their powers. "Without the industry which gathers facts and digests them the artist could not produce the abstract that delights us. The time and place for his gathering such facts is when he approaches nature as a student. When he comes to art expression he will use them as his basis to express his idea, but never flaunt his industry as a virtue." The remark applies not only to natural fact and details, but to those which the architect has to make his own. There is a tendency among many in the profession to flaunt their details, claiming a credit for them. Here lies the error. The architect, like the painter and sculptor, should discipline his mind by a study of detail derived from Classical and Mediæval precedents; he should gather as many facts as he can about the laws and results of science; but having acquired them, he should endeavor to give us a true abstract, without troubling himself to show his learning or the process by which he has produced his design. The painstaking display of detail has never been helpful or inspiring either in painting or architecture; it has only been productive of literalists and copyists. The secret of art is to conceal art—that is, to be able to dispense with the outworks, the scaffolding, in other words those preliminary and disciplinary studies which must be learned in the first place. As one writer observes, the elimination of extraneous detail is a necessary accompaniment to the production of every work of art. Often as much time is spent in erasing detail as has been spent in putting it down. A work of art, he says, consists in so much beauty to the square yard, not so much labor. "Paint, no matter how well," says A. Roche, "every flickering blade of the grass that reaches out before you, and say, do you get the real, the absolute impression which David Cox obtained by his great seemingly blundering washes of color? The effort at material completeness in the accurate limning of every blade of grass falls far short of such a perfect sense of completion and realization as that produced by the feeling, nervous touches of David Cox." So with architectural detail; the designer may be most minute and lavish in his display, yet it produces only a bewildering confusion in the mind when compared with that broad treatment of façade or wall surface which evinces the design of the master, and the impression of completeness and unity so necessary to every architectural work. We might illustrate these remarks by referring to many of our recently designed stone and terracotta buildings in New York and elsewhere, to a great deal of the over-carved furniture which is turned out by large commercial firms, by the elaborate ornamentation of articles like stoves and fireplaces, fenders, and the like, and other metal work, and by surface and restless decoration generally as applied to plaster, to moulded terracotta and other materials.

The question where to obtain good detail is one which will be asked by many who rely a great deal on it in their work. Old

and modern buildings will both help the architect. England, France and Belgium are particularly rich in old examples. No modern author has studied detail so thoroughly and upon such scientific principles as Viollet le Duc. In his article "Construction," in the *Dictionnaire Raisonné*, he has given us many evidences of this. Who has more thoroughly investigated the construction of details of the developments of the twelfth and thirteenth centuries in France? Every detail to him was a source of information. It was eagerly examined and its principles investigated. He traces the origin of the detail. If it is a vault, he inquires into its geometrical principles. He shows how the design of many of the finest Gothic buildings in France began at the vault: he describes how the Ile-de-France builders proceeded. These early Gothic builders possessed an instinct before they became aware of the theory. Every detail of the buildings showed a series of attempts to solve a difficulty. Le Duc takes for example that beautiful edifice the church of Notre Dame at Chalons-sur-Marne. The apse of that church is a charming example of well-studied detail. The same painstaking architect gives us page after page of detail all worked out from scientific principles, as in his chapter on Developments of the 13th century, where he gives details of the church of Notre Dame at Dijon, of St. Stephen at Auxerre, the systems of Champagne and of Burgundy. The development of moulded ribs from the lower beds or abutments of arches at the abacus of the capital is traced, and the crisply-drawn diagrams of arch mouldings, sections of vaults, and the isometrical sketches of their springing are excellent examples of the study of detail. We should, therefore, recommend the student to study the Dictionary of Viollet-le-Duc as a groundwork for future study of Gothic and Renaissance detail, and there are a few other works, like those of the "Specimens" and "Examples" of Gothic architecture by A. Pugin; but the main source of study is that derived from old buildings. The camera may be brought into use in reproducing the general features, but more will depend on the careful measurement and drawing by hand of details, like mouldings, tracery, vaulting and decorative carving. New buildings of acknowledged merit cannot be dispensed with, as they often furnish the architect with modern developments of value in the different trades, fittings, etc. But the architect must not altogether rely upon precedent; he ought to be able to understand the principles of construction and the adaptation of materials for various purposes. Here he must depend on his own knowledge and resources acquired in the study of ancient and modern buildings in the workshop or studio. He must be to some extent, if possible a handicraftsman able to realize the working and limitations of such materials as brick, stone, concrete, wood, metal, plaster, etc., for which purpose the modern workshop is of more value to him than the conventional studio of the professional artist. All these methods of study must be pursued if the profession is to repudiate that system of borrowing and stealing details from old and new buildings with which to conceal the emptiness of their own creations.

DANGER OF ORDINARY WOODEN WINDOW TRIM.

THE protection of the more seriously exposed window openings in the congested district of a city must be a part of any plan for the elimination or the lessening of the conflagration hazard. No building, however well constructed, can withstand or check a spreading fire unless its exposed windows are effectively protected. The Baltimore conflagration proved that beyond a doubt.



BEAUX ARTS COMPETITION. CLASS B. THE IONIC ORDER.

I Mention, C. R. Eggers, Atelier Hornbostel.

As a barrier to flame the ordinary glass window is absolutely of no value. It is readily cracked by heat, or broken by flying objects, hose streams, etc. The ordinary wooden window frame and sash furnishes just so much more fuel for a fire. Apparently the idea of getting rid of the combustible trim of windows was not thought of until the invention of wireglass. The adoption of wireglass as a substitute for fire shutters made a stronger window frame and sash necessary; moreover, to use wood or any other combustible trim would be absurd. Thus came into prominence the subject of metallic window frames, without which wireglass would be valueless as a fire retardant. Metallic window frames combine lightness and strength, durability and rigidity.

The use of metallic sash is not limited to windows in exterior walls. It is especially adapted to skylight construction, and must be used wherever wireglass is employed to retard fire. Partition walls for dividing up rooms of large area may be constructed in a manner similar to fireproof windows and will accomplish the same purpose. Fire shutters of approved construction will effectually prevent the spread of fire if closed at the critical moment. If they are not closed, or are neglected for any reason, they are of no use. Fire shutters have their own range of usefulness, but there are locations where something more adapted to the purpose must be used.

If a live ember or a burning brand falls on an ordinary wooden window sill the wood is almost sure to take fire. Intense heat radiated by fire in a burning building will ignite an ordinary wooden window frame. These facts are a strong recommendation for the metallic frame. The practical value of non-combustible window trim was promptly acknowledged by insurance men and the National Board of Fire Underwriters went a step further by promulgating specifications for such work.

In the matter of window protection each case must be carefully studied. Automatic devices, if reliable, are a better form of protection than non-automatic ones which must be operated by hand. Metallic window sash is made to close automatically by the fusing of a link of solder and metal. For all practical purposes such windows are always closed. Exposed windows on the upper floors of high buildings and windows on narrow alleys require special consideration.

His architect is directed to use the columns by placing their axes on the apices of an equilateral triangle of 3 feet 6 inches a side. The columns will rest on a platform, with steps and other accessories; between them will be a suitable basin vase or mouth, through which the water will rise in a jet.

Upon the columns will rest an entablature supporting a globe, which may be of metal in the form of an astrolabe or planetary sphere or clock.

The Esquisse shall consist of a plan, section and elevation at $\frac{1}{4}$ inch scale. The esquisse must be in ink.

The rendered drawings shall consist of plan, section and elevation, showing a single column at the back, at $\frac{1}{2}$ inch scale, and a detail of the order, showing one column in direct elevation, with part of shaft omitted, and such other features as the designer chooses to show, at $1\frac{1}{2}$ inch scale.

The drawings may be rendered in India ink or colors; the detail must be drawn and rendered with great care, with accurately cast shades and shadows.

LLOYD WARREN,
Chairman Committee on Education.

REPORT OF JUDGMENT HELD MAY 25, 1904.

Jurors present—Messrs. Atterbury, Barber, Hornbostel, Perkins, Denby, Gay, Kohn, Trowbridge, Lord, Lloyd Warren.

CLASS B—ORDER PROBLEM. THE IONIC ORDER.

Bill, H. S.	New York	Atelier Almirall	Mention
Breiby, J. C.	New York	Atelier Barber	Mention
Bruno, F. A.	New York	Atelier Barber	Mention
Eggers, C. R.	New York	Atelier Hornbostel	I Mention
Hart, R. E.	New York	Atelier Perkins	I Mention
Ives, H. A.	New York	Atelier Perkins	Hors Concours
Varian, L. E.	New York	Atelier Barber	Mention
Wheeler, H. H.	New York	Atelier Barber	II Mention
Bond, W. C.	Washington	Atelier Pietsch	Mention
Hitt, S. M.	Washington	Atelier Pietsch	III Mention
Wehrell, J. F.	Washington	Atelier Pietsch	Mention

The Society of Beaux Arts Architects

INCORPORATED 1894.

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Chairman Committee on
Education.

OFFICIAL ORGAN - - ARCHITECTURE.

CLASS B.—ORDER PROBLEM.

The Committee on Education proposes as a subject for this competition,

THE IONIC ORDER.

The owner of an estate having in his possession three Ionic columns of the style of Louis XIV, 12 feet 0 inches high, decides to use them as the architectural setting of a spring, whose waters are brought from the side of a hill to its base by pipes.

THE ARCHITECTURAL LEAGUE OF NEW YORK.

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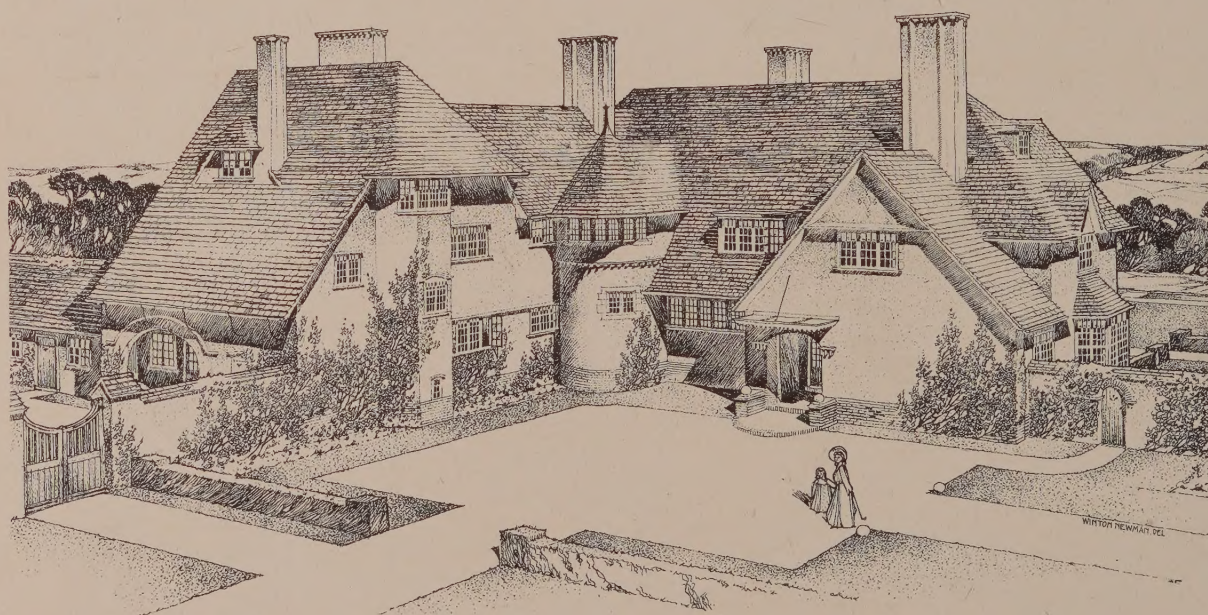
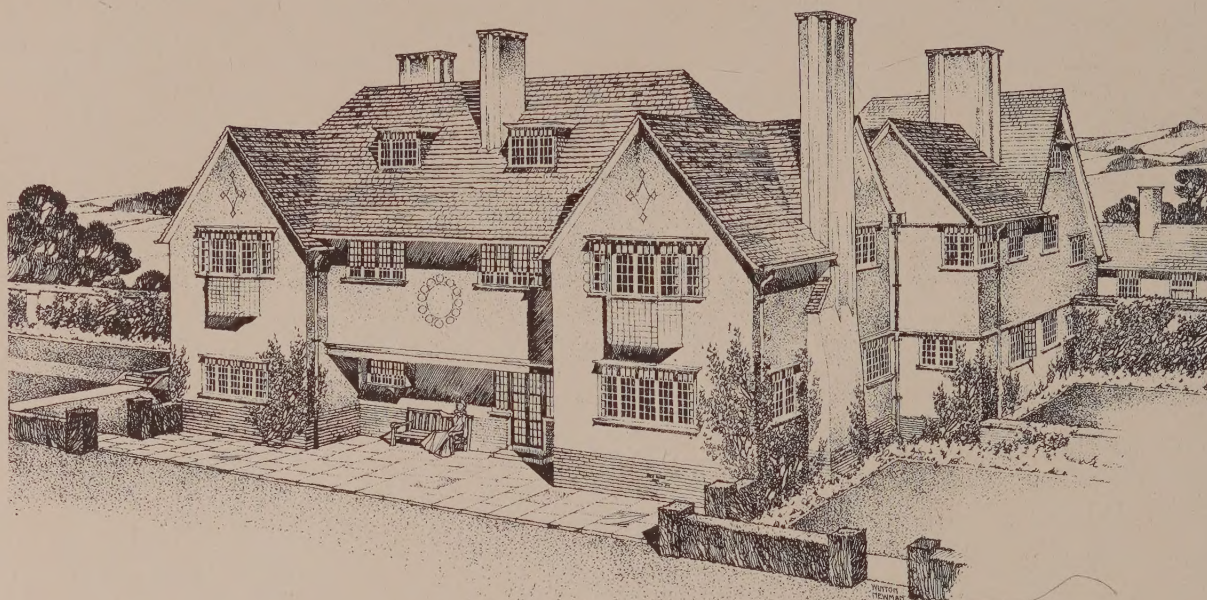
EDW. PEARCE CASEY,
Treasurer.

The Architectural League of New York devoted its monthly meeting and dinner, Tuesday evening, Nov. 2, to the subway. Representatives of the legal, executive and engineering branches of the Rapid Transit Commission were present as guests. The hall was decorated with sample ornamental medallions from the station decorations.

The advertising signs were knocked generously, and the references always brought applause. In introducing Frederick Crowinshield, the first speaker, President Arnold W. Brunner referred to the signs as the "inhuman feature of the subway." Mr. Crowinshield said that the station construction is one step forward in the union of art with modern construction.

In the absence of William Barclay Parsons, George S. Rice spoke on behalf of the engineering department of the Rapid Transit board. He said:

"We made many calculations toward getting rid of certain



DESIGN FOR A COUNTRY HOUSE, SHOWING ENTRANCE AND GARDEN FRONTS.

E. Guy Dawber, Architect.

objectional features: I mean the advertisements. In the beginning we hoped to keep out advertisements altogether. Unfortunately, a clause in the contract seemed to permit this privilege. I think, perhaps, that in a few days the engineers may be heard from and the situation be changed. Our policy was to run ornaments from one medallion to another, and thus limit the space where advertising could be permitted."

Mr. Rice showed how the difficulty of getting a lessee in the early days had kept the Rapid Transit Board from making a firm stand against advertising. "We knew that the contractor could pay a large part of his lease from money obtained from advertising contracts," he said, "and we had to let it go in that state."

"The league may be superstitious, but we don't believe in signs," said President Brunner, in introducing Grant La Farge, who designed the stations. Mr. La Farge told how they had tried to put a local significance in the station decorations. "However," he said, "there is very little tradition connected with Thirty-third street or Sixty-sixth street, for example. In the new downtown stations we hope to have more fun. That at Bowling Green will be one of the most elaborate. At Wall street the central medallions will show the old City Hall and there will be a decorative frieze of bulls and bears. In Fulton Street we will remember the inventor of the steamboat. The medallion at South Ferry will show the old lugger, the first ferryboat, and the frieze will suggest the sweep of the water front."

George L. Rives told of the legal difficulties in the beginning and how the bargain made by the city secured municipal ownership of the subway without municipal operation.

THE ENGINEER, THE ARCHITECT AND THE GENERAL CONSTRUCTION COMPANY.

(Continued.)

THEIR particular facility is that they, for a covering figure, can carry out all architectural detail and engineering work with-

out cost and with their own trained staff. This would be an excellent idea, if the staff were of that character; but in point of fact, they have not yet grasped the fact that it would pay them to employ the highest class of professional ability; and, therefore, the men employed by them in the work of design are often either small contractors, or are assistants of the same order as those to whom I have referred as being employed by some of the architectural profession. If the scope of these powerful concerns should eventually fully cover the field of building operation, the profession of architecture would be very completely visited for its shortcomings since the avowed idea of the construction company is to allow the architects no more than the opportunity of producing general designs to be by them detailed and developed; but, so far, owing to the very similar class of intelligence applied to their work of detail design, the result has often been poor architecture, and, more often still, poorer engineering. In respect to the latter, I regret to say that since the operations of the construction companies began, no advance whatever has been made in the improvement of the interior engineering of the buildings they have handled. In point of fact, their practice at present is the installation of poorer designs of mechanical equipment than were generally discredited before their methods obtained an ascendancy in modern building operations. It is but a natural result of such a system that this should be the case. A general contract for a great building is made on a condition which is the essential feature and object of the employment of a general contractor. It is that a building of a certain character, often identified only by a mere sketch or outline, or even by a partial reference to some existing building of a more or less similar type, shall be erected within a certain period for a certain sum, without any extra charges. Any attempt to introduce any detail of conveniences, of desirable materials, or of particular requirements, is met and combated by the objection that the builder must have a

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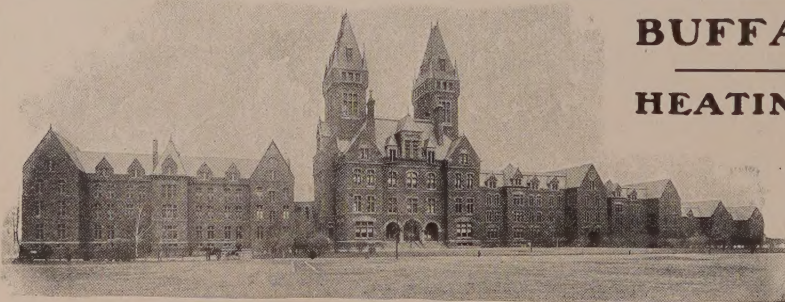
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free hand in selection or in dealing with competing manufacturers ; otherwise the cost will be increased, or the time limit will be exceeded, or labor trouble may ensue. So the owner signs away his money and gets in return a complete structure, it is true, such as his picture showed, which is, however, built of the material, equipped with the class of apparatus, proportioned to the extent of liberality, and constructed by the class of labor which have best suited the policy or profit of the contractor. If by the inducement of the needs of this building a gain can be made in another ; if by the sacrifice of a detail in one an extra can be avoided in another ; if by diverting proper labor from one, less competent or cheaper labor can be utilized in another—then these policies are open to adoption, are liable to be adopted, and are and have been in many cases adopted. As to the designing work produced under this system, it is inferior and is done by inferior help, whose efforts are subordinated to the one predominating consideration of avoiding all avoidable cost, while at the same time evading the much-abused “extra,” which in this class of contract, coming directly on the construction company, is of course to be avoided at all cost of sacrifice of efficiency. I will give an instance of an actual occurrence :—In the construction of one such building it was discovered that by a blunder in reading, or more likely by an error in estimating, no provision had been made for the cost of carrying the decorative “effects” of the two outer sides of the building round its interior sides, which were exposed to the ownership of the abutting property. The difficulty was overcome by directing the engineer to cut down the equipment to a sufficient extent to pay for the deficiency. The proper equipment was, therefore, cut from two boilers of ample capacity and one spare, to two boilers which, when forced, can just do the work ; two generators will barely carry $\frac{5}{10}$ of the total lighting load, and $\frac{6}{10}$ only by overload ; the omission of every possible convenience and cross connection ; the reduction of the plumbing and character of the fixtures, and the skinning of the heating arrangements down to the cheapest system. The owners have the satisfaction of knowing that their building is carried out “without extra,” and has cornices of the anticipated appearance. But they do not know that they have not only paid an extra in full for the work, but also are paying an extravagant and permanent interest on the achievement in their coal, repair, and labor bills.

The Owner of Property.—I could multiply these instances ; but I do not know if there is any good in attempting to draw beneficial lessons for the education of an educated class which is, withal, too careless or incapable to take elementary precautions as to its own

rights and property. One would suppose that a most limited intelligence would enable a property owner to perceive that he is not likely to get something for nothing out of a smart firm of general contractors. As regards the features of engineering character in their buildings, it might naturally be assumed that men of business capacity and of ordinary intelligence would, in a matter in which they are directly and permanently liable for the costs of results, very closely examine into the conditions surrounding their future outgoings, with the aid of the best technical knowledge available. But that is rarely the case. Such people, when contemplating the construction of a building, are captivated by the ideas of outside design and interior decoration, and are under those influences to such an extent that the hard and mechanical details of engineering operations are uninteresting to them. They are also very frequently dependent on all such matters on some mechanic in their employment, such as the operating engineer or fireman in their own home or other property. These men, when put forward (as they very frequently are) to discuss or suggest or even to proportion necessary apparatus in a new building, do so with the natural subservience of their class and come under the architect's or contractor's dominance, their employment in this manner often resulting in worse blunders than would have been the case, without their limited ideas, and their liability to accept all kinds of assertions on the part of manufacturers. Not until it is much more widely understood that the mechanical apparatus in a building is the part of it that directly effects the pocket of the owner, that in it and by it he is constantly being defrauded and fleeced, will the present state of affairs be amended. I have recently had the opportunity of laying these views before one of the great mortgage-insurance companies, whose action will in future take into account the imperfections and deficiencies of mechanical apparatus in the building in which they take an interest. It may be that others will awake to this important element, and that through their action careless ownership will be aroused. Having sat for ten years past between these elements, and having had the good fortune not to fall into the evil graces of either, I am in hope that my plain speaking will be taken in good part and that all parties will proceed to set their courses with a little more regard for their true interests in this age of engineering detail. And I am thankful to record my knowledge that there are architects who fully live up to their undertakings in the respects I have named, as there are builders who are conscientious, and as there are owners who are capable of appreciating the value of the old saw—“Every man to his trade.”



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